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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,261

Applicant(s)

MURARI ET AL.

Examiner

Michael J. Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14,16,23,27 and 28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 23 and 27 is/are allowed.
6) ☒ Claim(s) 14,16 and 28 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Pending Claims

Claims 14, 16, 23, 27, and 28 are pending.

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The rejection of claim 23 under 35 U.S.C. 102(b) as being anticipated by LeBlanc et al. (US Pat. No. 3,597,301) has been overcome by amendment.
3. The rejection of claim 26 under 35 U.S.C. 102(b) as being anticipated by LeBlanc et al. (US Pat. No. 3,597,301) has been rendered moot by the cancellation of claim 26.

Claim Rejections - 35 USC § 102/103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claim 23 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over LeBlanc et al. (US Pat. No. 3,597,301).

Regarding claim 23, LeBlanc et al. disclose: **(23)** in a method of making an epoxy resin article (Abstract; column 3, lines 2-21) reinforced by multifilament, fiberglass fabric (Abstract; column 2, line 68 through column 3, line 2), the improvement which comprises the steps of:

(a) providing a latent catalyst inhibitor on the surfaces of the filaments of the fiberglass fabric (Abstract; column 2, lines 34-52), and

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(b) allowing epoxy resin to flow into the capillaries formed by fiber filaments (Abstract; column 3, lines 3-21: *impregnation*).

It should be noted that LeBlanc et al. do not explicitly disclose the limitation of *thereby substantially reducing the number of voids in the space between filaments in the article as compared to an article prepared without said inhibitor on filament surfaces*.

The instant invention provides a fiber treatment for fiberglass fabrics prior to impregnating the fiberglass fabrics with epoxy resin. The treatment involves contacting the fiberglass fabrics with a latent catalyst inhibitor. Specifically, this “latent catalyst inhibitor” is boric acid or another weak acid – *see specification page 9, lines 8-13*. The use of this “latent catalyst inhibitor” appears to assist in the substantial reduction of voids in the space between filaments in the multifilament fiberglass fabric.

Similarly, the teachings of LeBlanc et al. provide a fiber treatment for fiberglass fabrics (Abstract; column 2, line 68 through column 3, line 2) prior to impregnating the fiberglass fabrics with epoxy resin (Abstract; column 3, lines 2-21). Their treatment includes a boric acid (Abstract; column 2, lines 34-52), and the use of the boric acid treatment results in a final product that exhibits improved thermal stability and prolonged useful life at elevated temperatures (Abstract; column 2, lines 34-52).

The teachings of LeBlanc et al. do not mention the *reduction of voids in the space between filaments in the multifilament fiberglass fabric*; however, it appears that this would have been an inherent result of the treatment of Leblanc et al. because their treatment is identical in scope to the treatment of the instant invention, using boric acid (latent catalyst inhibitor) to treat their glass fabric prior to impregnation with epoxy resin. In light of this, it has been found that,

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“Products of identical chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Furthermore, it has been found that “[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer,” – *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999).

Therefore, if not explicitly taught by LeBlanc et al., then the substantial reduction of voids in the space between filaments in the multifilament fiberglass fabric would have been an inherent feature of Leblanc et al. because the scope of the claimed treatment is identical to the scope of the LeBlanc et al. treatment, wherein boric acid (latent catalyst inhibitor) is used to treat the glass fabric prior to impregnation with epoxy resin.

Claim Rejections - 35 USC § 103

6. The rejection of claim 27 under 35 U.S.C. 103(a) as being unpatentable over LeBlanc et al. (US Pat. No. 3,597,301) in view of Kabeta et al. (US Pat. No. 5,075,459) stands for the reasons of record.

Regarding claim 27, LeBlanc et al. disclose the article of claim 26; however, they do not explicitly disclose (27) a printed wiring board made from said article.

Kabeta et al. disclose a similar article (*Abstract; column 6, lines 10-53*). The teachings of Kabeta et al. demonstrate that epoxy prepregs are recognized in the art as suitable materials for forming printed wiring boards – *see column 6, lines 15-18*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the article of LeBlanc et al. to form a printed wiring board because the teachings of Kabeta et al. demonstrate that epoxy prepregs are recognized in the art as suitable materials for forming printed wiring boards.

Terminal Disclaimer

7. The terminal disclaimer filed on August 8, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Pat. No. 6,720,080 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Double Patenting

8. The ODP rejection of claim 26 over claims 1 and 5 of US Pat. No. 6,720,080 has been rendered moot by the cancellation of claim 26.

9. The ODP rejection of claim 23 over claims 1 and 5 of US Pat. No. 6,720,080 has been overcome with a timely filed terminal disclaimer.

10. The ODP rejection of claim 27 over claim 5 of US Pat. No. 6,720,080 in view of Kabeta et al. (US Pat. No. 5,075,459) has been overcome with a timely filed terminal disclaimer.

Allowable Subject Matter

11. Claims 14, 16, and 28 are allowed.

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12. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 28, the closest prior art is LeBlanc et al.; however, they fail to teach or suggest the additional pretreatment step of immersing the fabric in a bath containing at least one cationic amino-silane coupling agent, prior to treating the fabric with the finish bath containing a weak acid (the inhibitor). Kabeta et al. disclose a process of treating a glass fabric with a cationic amino silane; however, there is no motivation to combine the teachings of these two references. Claims 16 and 14 are allowable because they are dependent from claim 28.

Response to Arguments

13. Applicant's arguments filed August 8, 2005 have been fully considered but they are not persuasive.

Applicant argues, "The abstract of the LeBlanc reference does not recognize that voids are a problem which they are in the use of epoxy circuit boards that are reinforced with fiberglass fibers. In fact, it is not mentioned that voids occur or don't occur in the structures and resins used by LeBlanc...Applicants' claim 23 treats the use of the latent catalyst inhibitor as an improvement perhaps in the nature of a new use not recognized or known heretofore. Thus applicants' claim 23 is directed to a novel and non-obvious invention."

The Examiner agrees that the teachings of LeBlanc et al. do not mention void size reduction; however, it appears that this would have been an inherent result of the treatment of Leblanc et al. because their treatment is identical in scope to the treatment of the instant invention, using boric acid (latent catalyst inhibitor) to treat their glass fabric prior to impregnation with epoxy resin. In light of this, it has been found that, "Products of identical

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chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Furthermore, it has been found that “[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer,” – *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Hence, these arguments are not persuasive.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely
Primary Examiner
Art Unit 1712

November 1, 2005

MICHAEL FEELY
PRIMARY EXAMINER